



## Bed Bug Action Plan for Apartments

*Dini M Miller, Ph.D., Department of Entomology, Virginia Tech*

---

### Introduction

Bed bug infestations have been a nightmare for apartment managers. Apartment communities have seen their pest management expenses go from \$30,000 to over \$100,000 in a single year. Many apartment managers have admitted to hiring and firing 3 to 4 pest management companies because none were able to get the bed bug problem under control. Some complexes have even closed or sold because they could no longer afford to treat communities that were 50-90% infested.

One of the reasons that bed bug management has failed so miserably in apartments is that control has been approached on a unit by unit basis. Managers have attempted to charge tenants for bed bug control, causing many tenants to stop reporting infestations. Management has also neglected to take a leadership role in addressing bed bug infestations, relying on the efforts of their pest management company who may be inexperienced in bed bug control but offers an inexpensive price.

It is time for a change. It is time for management associations to take charge of what is happening in their buildings. It is time to accept the fact that bed bugs are now a regular member of the apartment community and their management must become part of the regular maintenance program. It is also time to hire a pest control company with documented experience in bed bug management and to develop a community action plan for bed bug management in multi-unit housing.

### Bed Bug Training for Your Staff

Apartment managers need to become bed bug experts. Your employees need to know what bed bugs look like and how to identify bed bug evidence so they can recognize a bed bug infestation when they see one. Have your experienced contract pest management professional (PMP) train your employees to recognize bed bug infestations, and where to look for bed bugs





## Consumer Health Department

303 Palo Pinto St. Weatherford, TX 76086 Phone: 817-598-4149 Fax: 817-598-4007

hiding in vacant units.

Be prepared to take a leadership role in bed bug management. Requiring that residents pay for bed bug remediation has resulted in widespread infestations. If you are to have any hope of controlling your bed bug issues you must be prepared to pay the bill. If your complex is not paying for bed bug management, you have no control over the bed bug infestations (you might not even be aware of them) or the potential contamination of your buildings by residents attempting to control the bed bugs themselves.

## Community Information

Develop a community-wide bed bug awareness program. Apartment managers have been very reluctant to develop a community-wide program because it is like admitting that the complex has bed bug problems. However, bed bugs have become so widespread that not having a plan, or attempting to hide the fact that infestations have occurred in your buildings no longer makes sense. Let your tenants know when they sign the lease that you are on top of the bed bug issue and your complex has a plan for dealing with bed bugs. Let them know that you expect their cooperation with that plan. So what should be included in your bed bug awareness program?

- **Printed literature describing bed bugs and their evidence. Use color pictures. Make sure the document is available in English, Spanish, and other languages. But do not rely on your tenants to read the literature, many may not be able to read English or even their native language. Go over it with them in person to make sure that they know what to look for.**
- **Signs posted near the dumpster warning residents about bed bugs on discarded furniture. The signs should also show how to mark or damage infested furniture so people will leave it alone.**
- **Notices encouraging tenants to report bed bug infestations right away. Let them know that they will not be penalized or charged for bed bug treatment unless they fail to provide access to their apartment, or do not cooperate with bed bug management efforts as requested by the PMP.**
- **Give a copy of your bed bug action plan to each resident, so that they understand what will take place in their apartment during a bed bug treatment. Let them know their responsibilities regarding access and preparation of their unit. Go over the action plan with them.**
- **Place signs in the laundry area warning residents not to put bed bug infested plastic bags in the trash. These bags need to be put in the dumpster outside.**



## Consumer Health Department

303 Palo Pinto St. Weatherford, TX 76086 Phone: 817-598-4149 Fax: 817-598-4007

### When an Infested Unit is Reported

When an infested unit is reported, your action plan will be to call the pest management company immediately to set up an inspection appointment. Make the resident aware of the appointment and remind them that they must provide access to the unit. An experienced pest management company will give a cursory inspection of the apartment and then provide a treatment cost estimate based on the size of the unit, the amount of clutter, and the size of the infestation\*.

Some companies will have extensive preparation instructions requiring that residents strip their beds, empty their closets and drawers, launder everything they own, and place everything that can't be laundered into plastic bags. While this does make treatment of baseboards, cracks and crevices easier for the PMP, the resident now has a huge laundry bill and has to live out of plastic bags. Many PMPs complain that residents fail to comply with preparation instructions. It is easy to see why. A new way of thinking is to have tenants prepare for treatment by simply picking up and bagging clothes that are not already stored in drawers or closets, and removing items from under the bed (**but not moving them into an uninfested room**). With this minimal preparation, the PMP can see the infestation as it is, without the bed bugs being stripped off the bed, bagged, or moved around the unit. Whatever your pest management company requires, make sure that the resident agrees to comply with all PMP instructions, or risk not having their unit treated.

Bed bug treatment should be performed by two pest professionals working together to apply insecticides and non-chemical bed bug treatment methods. The first treatment should be intensive. Two subsequent inspections/treatments should be made at two week intervals to treat any nymphs that might have hatched. See the listed treatment methods. For a complete explanation of each method see *Non-Chemical Bed Bug Management and Bed Bug Treatment Using Insecticides*.

At the two week follow-up visit, the PMP will inspect the ClimbUp™ devices, the mattress encasements and other infested locations identified during the initial treatment. The PMP may also provide a survey asking the resident if they have seen bed bugs or had any bites since the last visit\*. If not, the pest management company will most likely discontinue any further inspections after the second follow-up visit. However, if the resident reports additional bugs or bites, the follow-ups generally continue at two-week intervals unless further visits are terminated by the management\*.

#### Potential Treatment Methods

- Clutter removal
- Mattress encasements
- ClimbUp™ devices
- Steam
- Vacuuming
- Desiccant dusts
- Liquid insecticide formulations
- Aerosol insecticides
- Insecticidal dusts



## Consumer Health Department

303 Palo Pinto St. Weatherford, TX 76086 Phone: 817-598-4149 Fax: 817-598-4007

### Adjacent Units

Your plan must include how units that are adjacent to the infested unit will be addressed. Bed bugs will move between apartment units. In fact, an infestation next door may be the source of the infestation in the unit that is being treated. Therefore, inspection and possibly treatment of units sharing a common wall with an infested unit must be standard procedure\*. Apartment managers are often reluctant to have adjacent units inspected because of the expense, and fear of alarming the residents in those units. However, if you truly intend to control a bed bug infestation it is absolutely essential that the units on either side and the units above and below be inspected for bed bugs at two week intervals over the next 4 weeks. If bed bugs are found in any of the adjacent units, the units adjacent to that unit must also be inspected.

Quite often, adjacent units will have bed bugs but the infestation is too small to detect during a visual inspection. A proactive and relatively inexpensive method for detecting these small infestations is to install ClimbUp Insect interceptors™ under the legs of the bed and other furniture (see Non-Chemical Bed Bug Management). The presence or absence of bed bugs in the ClimbUp™ at the two week inspection intervals is a good indicator as to whether the adjacent units have bed bugs or not\*.

### Expectations of Control

While you can expect the bed bug population to be greatly reduced after the initial treatment, it is not reasonable to expect that the population is gone. In fact, bed bugs may be even more obvious the first 24 hours after treatment because they are sick and wandering out into the open. Do not treat these bugs with insecticide. Within the next two days, the bed bugs should start to die in large numbers. However, even if bed bugs appear to be gone a week after the initial treatment, follow-up treatments need to be made within two weeks to kill any nymphs that may have hatched during the treatment interval. After the treatment and two follow-ups, if the tenants have not seen any bed bugs nor received any bites, the population can be considered controlled. However, no one can guarantee that the bed bugs are completely gone, so the resident should continue to be on alert for bed bugs.

If an infestation is particularly large, many follow-up treatments may be required, but no one can predict how many. In a cluttered environment where populations have been established for a year or more, the bed bugs may never be eliminated (unless the building is fumigated). In these cases, suppression of the population, so that the tenant is not being bitten constantly, may be the best that can be achieved even if the follow-up visits continue indefinitely. In these cases, it is very important that the apartment management and the resident have realistic expectations of what the control measures will and will not do.



## Consumer Health Department

303 Palo Pinto St. Weatherford, TX 76086 Phone: 817-598-4149 Fax: 817-598-4007

### Vacant Units\*

Bed bugs in vacant units are not only a control issue but a legal issue because you cannot guarantee that unit is completely free of bed bugs (other than by using chemical fumigation). So, how can you rent it out again? If you are only using conventional treatment to address a vacant infested unit, consider the following:

- **Bed bugs become inactive when there is no host present and may not contact insecticide treated surfaces**
- **There is no reliable bed bug monitoring device to use when a host is not present**
- **Bed bugs may move to adjacent units looking for food**

The best solution is to have the unit treated intensively. Your pest management company can drill the wall voids and remove the baseboards and crown molding to treat these locations with dust. They can also apply a thorough treatment of insecticides to crack and crevices. Adjacent units can also be monitored with ClimbUp™ devices. If no bed bugs are found after three inspection/treatments, made two weeks apart (yes, six weeks), and all of the treatment efforts and inspection results have been documented, it may be safe to rent the unit again. However, be prepared to respond immediately if the new residents make a bite complaint.

Alternatively, the apartment could be inspected by a scent detection canine (bed bug sniffing dog). Using a trained dog to detect bed bug infestations is an excellent method for determining if bed bugs are still present or not. Bed bug dogs can tell the difference between a live and dead infestation, and they can usually detect even a single bed bug egg. However, there are currently only a few dogs available for this purpose. So hiring an experienced bed bug dog and handler for apartment inspections purposes will be expensive.

### Chemical Fumigation

Although not yet widely used for bed bug elimination, chemical fumigation is becoming more popular for treating entire buildings when repeated insecticide treatments have failed. In locations that house elderly or health impaired residents or that have excessive clutter, whole building fumigation may be the only option for getting rid of the bed bugs completely. Unlike all other treatments, chemical fumigation (Vikane®) guarantees that all of the bed bugs and eggs will be gone (until the resident brings them in again). Vikane® can also be used in a fumigation chamber where residents place their belongings (books, electronics, etc. inside a sealed trailer where they are fumigated by a certified PMP.



## Consumer Health Department

303 Palo Pinto St. Weatherford, TX 76086 Phone: 817-598-4149 Fax: 817-598-4007

### Heat

Heating units are now becoming available for treating apartment units. The unit is treated by raising the ambient temperature to 135°F. This temperature will not damage the resident's belongings but the heated air will penetrate all cracks and crevices where bed bugs live causing them to reach their thermal death point (114-115°F). While heat treatment is usually 100% effective, building construction features sometimes create heat sinks that provide refuge for bed bugs. So it is recommended that heat treatment be supplemented with a single insecticide application to harborage locations.

Heat can also be used to treat the residents' belongings in a chamber. However, unlike chemical fumigation, heat does not have to be applied by a certified pest management professional. Heat chambers and even apartment heating packages can be purchased by the apartment management company and applied by trained employees in their buildings.

### Summary

A bed bug action plan for apartments should include employee education, a community wide awareness program, and a bed bug reporting procedure that the resident agrees to upon signing the lease. The action plan should also include the hiring of an experienced pest management company and the provision of two follow-up inspections/treatments for each infested unit and adjacent units.

\*Cooper Pest Solutions, Lawrenceville, New Jersey